

## Liverpool John Moores University

Title: CELL TECHNOLOGY  
Status: Definitive  
Code: **7016BTBMOL** (120649)  
Version Start Date: 01-08-2015

Owning School/Faculty: Pharmacy & Biomolecular Sciences  
Teaching School/Faculty: Pharmacy & Biomolecular Sciences

Team	Leader
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**Academic Level:** FHEQ7      **Credit Value:** 20.00      **Total Delivered Hours:** 36.00  
**Total Learning Hours:** 200      **Private Study:** 164

### Delivery Options

Course typically offered: Semester 2

Component	Contact Hours
Lecture	21.000
Practical	9.000
Seminar	4.000

**Grading Basis:** 40 %

### Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Exam	Exam	Examination - essay questions	60.0	2.00
Report	Report	Practical report	40.0	

### Aims

*To provide an understanding of cell culture as a technological component of aspects of biological research and commercial exploitation.*

## **Learning Outcomes**

After completing the module the student should be able to:

- 1 Demonstrate an understanding of the applications of cell technology and discuss the techniques used in culturing animal cells.
- 2 Discuss the principles involved in the commercial production of therapeutic agents from cells.
- 3 Analyze, interpret and critically discuss data relating to cell technology.
- 4 Discuss methods which are commonly used in plant cell culture.

## **Learning Outcomes of Assessments**

The assessment item list is assessed via the learning outcomes listed:

Examination	1	2	4
Report	3	4	

## **Outline Syllabus**

*Animal cell culture methods and factors necessary for the maintenance and growth of cells in culture. Design of culture facilities. Safety issues.*

*Genetic engineering of animal cells: infection, expression vectors, immortalised cell lines, transgenic animals.*

*Animal cell products and commercialisation.*

*Plant cell culture and commercial products derived from plant cells.*

*Protein expression and processing. Scale-up, bioreactors, process control and downstream processing.*

## **Learning Activities**

Lectures, practical.

## **Notes**

This module provides an insight into the principles and practical techniques involved in the commercial exploitation of animal cell processes.